

WHAT IS CLAIMED IS:

1. A stretch film having an ultimate stretch of at least 200 percent ,
a Dart A of at least 430 gms/mil and a CF of 5 percent or less.
- 5 2. The stretch film of Claim 1 wherein the film has 3 or more layers.
3. The stretch film of Claim 1 wherein the film comprises at least 50
percent by weight polyethylene.
- 10 4. The stretch film of Claim 1 wherein the film is in the range of 0.4
to 3 mil in thickness.
5. The stretch film of Claim 4 wherein the film is in the range of 0.7
mils to 3 mils.
- 15 6. The stretch film of Claim 1 having a Dart A greater than 570
gms/mil.
7. The stretch film of Claim 1 having a Dart A greater than 700
20 gms/mil.
8. The stretch film of Claim 1 having a CF of 3 percent or less.
9. The stretch film of Claim 1 having an ultimate stretch of at least
25 300 percent.
10. The stretch film of Claim 2 wherein at least one non-surface layer
comprises a polyethylene characterized as having:
a density from 0.9 g/cc to 0.96 g/cc;
30 a melt index from 0.5 g/10 minutes to 10 g/10 minutes, measured in
accordance with ASTM D 1238, condition 190C/2.16 kg; and
a molecular weight distribution from 2.5 to 4.5.
11. The stretch film of claim 1 having at least one non-surface layer
35 which comprises at least one propylene polymer.
12. The stretch film of Claim 1 comprising a homogeneous polymer
component.
- 40 13. The stretch film of claim 1 wherein the film is made at an output
rate of at least about 6 pounds/hour/inch of die width.
14. A stretch film comprising at least one layer comprising an ethylene
polymer, wherein the film has a tensile stress at break of at least 5000

psi and an ultimate stretch of at least 200 percent , and a CF of 5 percent or less.

15 15. The stretch film of Claim 14 further characterized as having a Dart A of at least 430 gms/mil

16. A stretch film of claim 13 wherein the film contains a non-surface layer comprising at least one propylene polymer.

10 17. A stretch film of claim 14 wherein the film contains a non-surface layer comprising at least one propylene polymer.

15 18. A stretch film having an ultimate stretch of at least 200 percent , a Dart A of at least 430 gms/mil and a CF of 5 percent or less, and comprising at least three layers, wherein a non-skin layer comprises a propylene polymer, and at least one other layer comprises an ethylene polymer composition, wherein the ethylene polymer composition comprises:

(A) from 10 percent (by weight of the total composition) to 95 percent (by weight of the total composition) of at least one ethylene interpolymer having:

20 (i) a density from 0.89 g/cm³ to 0.935 g/cm³,

(ii) a melt index (I₂) from 0.001 g/10 minutes to 10 g/10 minutes, preferably from 0.001 g/10 minutes to 1 g/10 minutes, more preferably from 0.001 g/10 minutes to 0.5 g/10 minutes,

25 (iii) a slope of strain hardening coefficient greater than or equal to 1.3, and

(iv) a Composition Distribution Index (CDBI) greater than 50 percent; and

30 (B) from 5 percent (by weight of the total composition) to 90 percent (by weight of the total composition) of at least one ethylene polymer having a density from 0.93 g/cm³ to 0.965 g/cm³ and a linear polymer fraction, as determined using temperature rising elution fractionation (TREF).

35 19. A stretch film having an ultimate stretch of at least 200 percent , a Dart A of at least 430 gms/mil and a CF of 5 percent or less, and comprising at least three layers, wherein a non-skin layer comprises a propylene polymer, and at least one other layer comprises an ethylene polymer composition, wherein the ethylene polymer composition comprises:

40 (A) from 10 percent (by weight of the total composition) to 100 percent (by weight of the total composition) of at least one ethylene interpolymer having:

(i) a density from 0.89 g/cm³ to 0.935 g/cm³,

(ii) a melt index (I₂) from 0.001 g/10 minutes to 10 g/10 minutes,

45 (iii) a molecular weight distribution, Mw/Mn, from 2 to 4, and

(iv) a Composition Distribution Index (CDBI) greater than 50 percent; and

(B) optionally, from 5 percent or less (by weight of the total composition) to 90 percent (by weight of the total composition) of at least one ethylene polymer having a density from 0.93 g/cm³ to 0.965 g/cm³ and a linear polymer fraction, as determined using temperature rising elution fractionation (TREF).

20. The stretch film of claim 19 wherein (A) has a melt index from 0.001 g/10 minutes to 1 g/10 minutes.

21. The stretch film of claim 19 wherein (A) has a melt index from 0.001 g/10 minutes to 0.5 g/10 minutes.

22. A stretch film having an ultimate stretch of at least 200 percent, a Dart A of at least 430 gms/mil and a CF of 5 percent or less, and comprising at least three layers, wherein a non-skin layer comprises a propylene polymer, and at least one other layer comprises an ethylene polymer composition, wherein the composition comprises:

(A) an interpolymer having a narrow molecular weight distribution and a narrow composition distribution breadth index (CDBI), defined as the weight percent of the polymer molecules having a comonomer content within 50 percent of the median total molar comonomer content, which is greater than about 50 percent and a degree of branching less than or equal to 2 methyls/1000 carbons of about 15 percent (by weight) or less and having an aluminum residue content of less than or equal to about 250 ppm present in the interpolymer composition, said interpolymer A being present in an amount of from 15 to 85 percent by weight based on the combined weight of Components A and B; and

(B) an interpolymer having a broad molecular weight distribution and a broad composition distribution and a degree of branching less than or equal to 2 methyls/1000 carbons of about 10 percent (by weight) or more and a degree of branching greater than or equal to 25 methyls/1000 carbons of from about 25 percent (by weight) or less present in the interpolymer composition, said interpolymer B being present in an amount of from 15 to 85 percent by weight based on the combined weight of Components A and B.

23. The film of any of claims 18-22, wherein the ethylene polymer composition comprises a skin layer.